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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/339,222	06/24/1999	TAKFUMI NOGUCHI	1982-0135P	2334

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EXAMINER	
VIDA, MELANIE M	
ART UNIT	**PAPER NUMBER**
2697	6

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/339,222	Applicant(s) NOGUCHI ET AL.	
	Examiner Melanie M Vida	Art Unit 2697	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

I.

Response to Amendment

1. This action is responsive to an amendment filed 3/17/03. Claims 1-8 are pending.

II.

Response to Argument

1. Applicant's arguments, see page 12, lines 13-16, filed 3/17/03, with respect to the rejection(s) using reference, Fuchsberger, U.S. Patent 4,825,297, applied to **claim(s) 1, 4, and 5** under 35 U.S.C. 102 rejection have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stokes et al, http://www.w3.org/Graphics/Color/sRGB.html, and further in view of Inoue et al. US Patent 6,128,407.

III.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes et al, http://www.w3.org/Graphics/Color/sRGB.html, (hereinafter, Stokes), and further in view of Inoue et al, US Patent 6,128,407, (hereinafter, Inoue).

Regarding **claim 1,** as shown in figure 2, Stokes illustrates the transformation between the original scene tristimulus value into the target monitor tristimulus values, read on an image correction method, (pg. 6 of 17, paragraph 4). Stokes illustrates equation, (1.1), for which CIE XYZ, provides the basis for sRGB encoding of the color, read on "performing a first conversion". Stokes states that the CIE XYZ values, read on "digital code values of each pixel of image data representing an image to be corrected", are converted to RGB tristimulus values, read on "are converted to values". The sRGB tristimulus values for the illuminated objects of the scene are a linear combination of the CIE XYZ values and the RGB tristimulus values that are computed with equation, 1.1, read on "whose relationship with light intensity values or light intensity logarithm values is linear", (pg. 10 of 17, lines 22-27). Stokes illustrates equations (1.2a-1.2b), that is the sRGB tristimulus values are next transformed, read on "performing a second conversion", to nonlinear sR'G'B' values, (pg. 11 of 17, lines 1-5). Further, Stokes recites that the sR'G'B' conversion, occurs after the CIE XYZ conversion, read on "in which at least one of the color or density of said image to be corrected, which is represented by said image data is corrected after said image data has undergone said first conversion", (pg. 11 of 17, lines 6). Stokes illustrates equations (1.3), that is the nonlinear sR'G'B' values are converted to digital code values, read on "a third conversion in which the values of each pixel of said image data are restored to said digital code values", (pg. 11 of 17, lines 18-23). Stokes recites that the converted digital code values occurs after the previous conversion, read on "after said image data has undergone said second conversion".

Stokes does not specifically disclose, "that the image data is corrected without changing the gradation of the image".

However, Inoue discloses a color image converter, read on an "image correction device", that executes color conversion, such that the degradation of color discrimination is reduced, (col. 2, lines 53-66), read on "corrects the image without changing the gradation of the image".

Regarding **claims 4, 5**, please refer to the like teachings of claim 1.

Regarding **claim 2,** Stokes further teaches the equivalent equations for the first or third conversion means, (page 11 of 17, equations 1.2a, 1.2b). Stokes illustrates the first set of equations (1.2a), read as the equivalent first set of three equations for **A, B, and C** in the claim. The second set of three equations, (1.2b), for **A, B, C,** in claim 2 is being read as the equivalent set given by Stokes for $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$, respectively. With regards to the first equation (1.2a) and the second equation (1.2b), **A, B, C**, are read as Stoke's, $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$, respectively. Similarly, $\mathbf{A'}$, $\mathbf{B'}$, $\mathbf{C'}$ are read as Stoke's, $\mathbf{R_{sRGB}}$, $\mathbf{G_{sRGB}}$, $\mathbf{B_{sRGB}}$, respectively Further, the constant, **e**, in the claim is read to be equal to the constant, one, in Stoke's disclosure. Next, the constant, **a,** is read as the constant, 12.92, in equation 1.2a or any constant that is fine-tuned according to the image processing application. With regards to equation 1.2b and the second set of three equations in the claim, the exponent constant, **c**, is read as any constant including the one illustrated by Stokes. Further, equation 1.2a, places an upper bound on $\mathbf{R_{sRGB}}$, $\mathbf{G_{sRGB}}$, $\mathbf{B_{sRGB}}$, whereby through mathematical translation of these bounds Stokes inherently defines an upper bound on $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$. This inherent upper bound on $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$ is being read as an upper limit or a predetermined upper value, **f**, per the claim. Similarly, Stoke teaches that there is lower bound given for $\mathbf{R_{sRGB}}$, $\mathbf{G_{sRGB}}$, $\mathbf{B_{sRGB}}$, whereby Stokes inherently defines a lower bound through mathematical translation of the bound given for this equation for $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$. The inherent lower bound on $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$ is being read as a lower limit

or a predetermined lower limit, **f**, per the claim. The constant, **d**, in the claim is being read as any numerical, offset or constant value to the color pixels, such as that given by Stokes, 0.055 in equation 1.2B.

Regarding **claim 3,** according to the definition in the specification, Stokes performs an affine transformation in equation (1.2b), (pg. 11 of 17), where the constant value 0.055 is a negative offset and the constant value 1.055 is the gain.

Regarding **claim 6,** as shown in figure 2, Stokes illustrates the transformation between the original scene tristimulus value into the target monitor tristimulus values, read on an image correction method, (pg. 6 of 17, paragraph 4). Stokes illustrates equation, (1.1), for which CIE XYZ, provides the basis for sRGB encoding of the color, read on "the step of performing a first conversion". Stokes states that the CIE XYZ values, read on "includes correcting each component of color of each pixel of image data representing an image to be corrected", are converted to RGB tristimulus values, read on "to be converted to values". The sRGB tristimulus values for the illuminated objects of the scene are a linear combination of the CIE XYZ values and the RGB tristimulus values that are computed with equation, 1.1, read on "whose relationship with light intensity values or light intensity logarithm values is linear", (pg. 10 of 17, lines 22-27).

Regarding **claims 7,** as shown in figure 2, Stokes illustrates the transformation between the original scene tristimulus value into the target monitor tristimulus values, read on an image correction method, (pg. 6 of 17, paragraph 4). Stokes illustrates equation, (1.1), for which CIE XYZ, provides the basis for sRGB encoding of the color, read on "the first conversion means". Stokes states that the CIE XYZ values, read on "converts digital signal values of each pixel of

image data representing an image to be corrected", are converted to RGB tristimulus values, read on "are converted to values". The sRGB tristimulus values for the illuminated objects of the scene are a linear combination of the CIE XYZ values and the RGB tristimulus values that are computed with equation, 1.1, read on "whose relationship with light intensity values or light intensity logarithm values is linear", (pg. 10 of 17, lines 22-27).

Regarding **claim 8,** please refer to the like teachings of claim 7.

IV.

Conclusion

1.. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kubo et al. US 2003/0095269 A1 see paragraphs 0049, and 0065.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220. The examiner can normally be reached on 8:30 am 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (703) 305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6743 for regular communications and (703) 308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Melanie M Vida
Examiner
Art Unit 2697

MMV
MMV
May 29, 2003

KA Williams
Kimberly A. Williams
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